

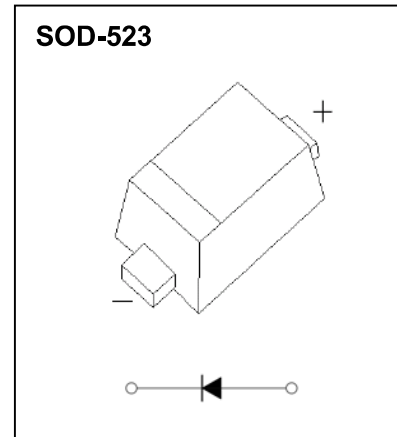
## FEATURES

- High-Speed Switching Applications
- Lead Finish: 100% Matte Sn ( Tin )
- Qualified Reflow Temperature: 260 °C
- Extremely Small SOD-523 Package

## MARKING: A6



The marking bar indicates the cathode



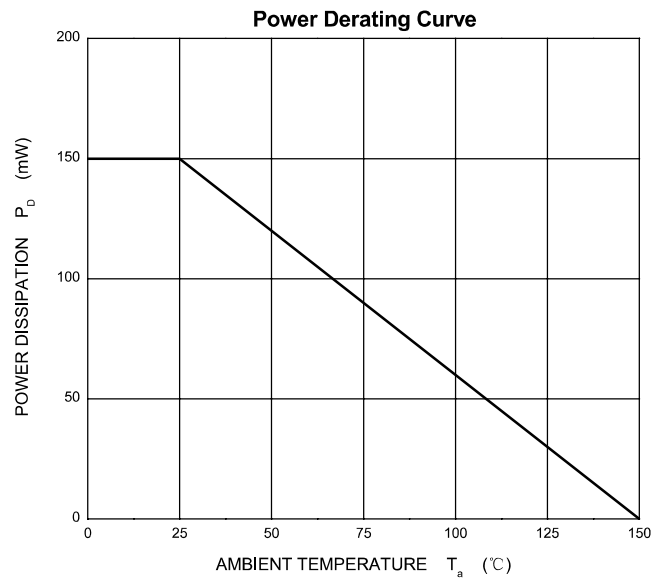
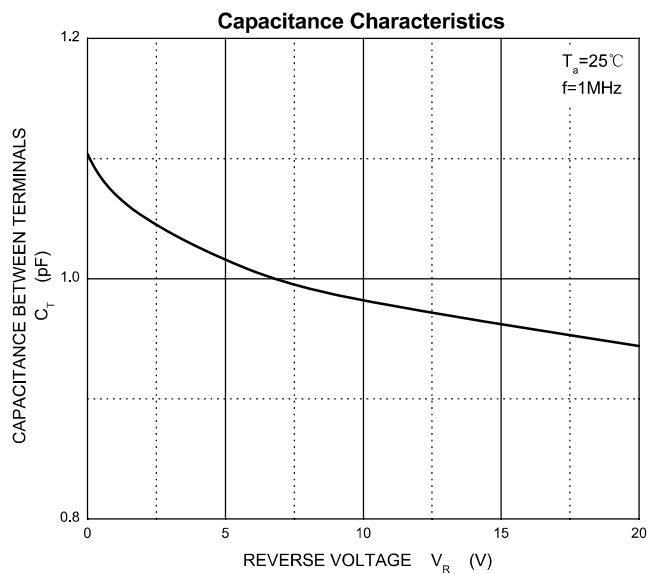
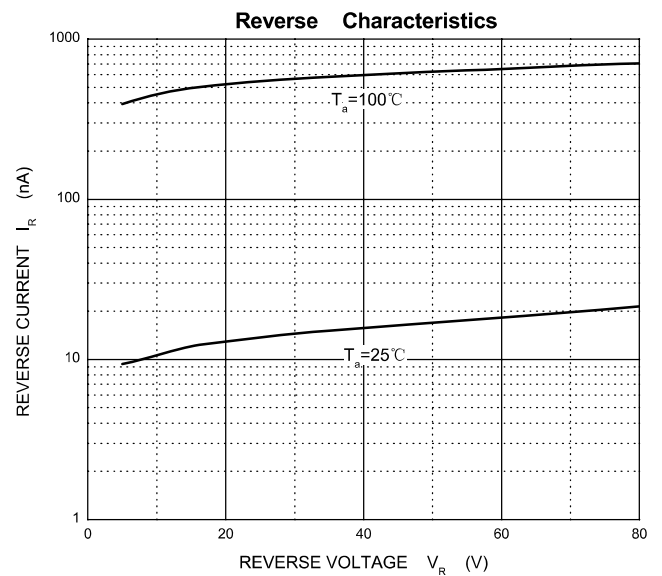
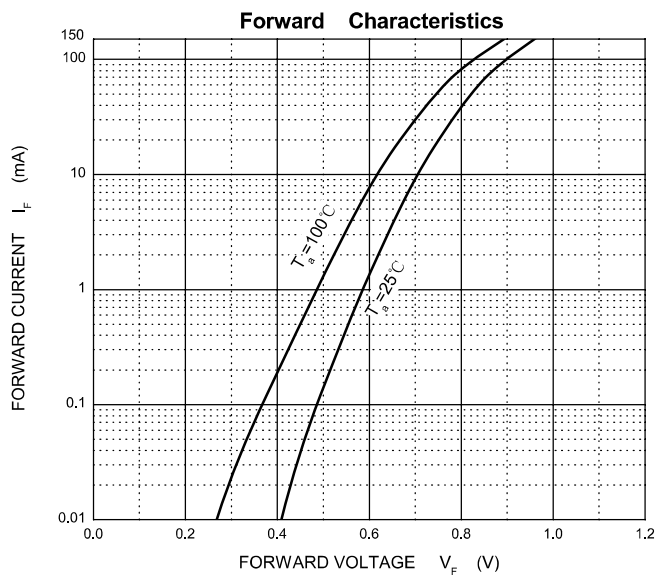
## MAXIMUM RATINGS ( $T_a=25^{\circ}\text{C}$ unless otherwise noted )

| Symbol          | Parameter                                                    | Value    | Unit                 |
|-----------------|--------------------------------------------------------------|----------|----------------------|
| $V_R$           | Reverse Voltage                                              | 75       | V                    |
| $I_F$           | Forward Continuous Current                                   | 200      | mA                   |
| $I_{FSM}$       | Non-repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$ | 2        | A                    |
| $P_D$           | Power Dissipation                                            | 150      | mW                   |
| $R_{\theta JA}$ | Thermal Resistance from Junction to Ambient                  | 833      | $^{\circ}\text{C/W}$ |
| $T_J, T_{stg}$  | Operation Junction and Storage Temperature Range             | -55~+150 | $^{\circ}\text{C}$   |

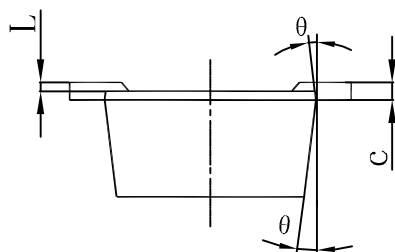
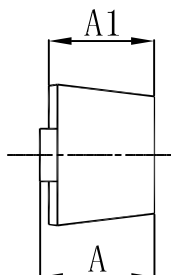
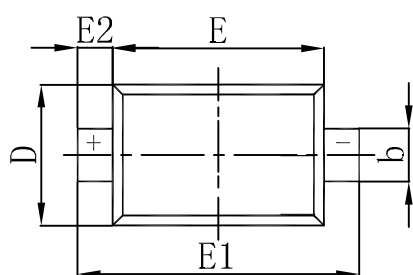
## Electrical Ratings @ $T_a=25^{\circ}\text{C}$

| Parameter                 | Symbol     | Min | Typ | Max  | Unit          | Conditions                                              |
|---------------------------|------------|-----|-----|------|---------------|---------------------------------------------------------|
| Reverse breakdown voltage | $V_{(BR)}$ | 75  |     |      |               | $I_R=100\mu\text{A}$                                    |
| Forward voltage           | $V_{F1}$   |     |     | 715  | mV            | $I_F=1\text{mA}$                                        |
|                           | $V_{F2}$   |     |     | 855  |               | $I_F=10\text{mA}$                                       |
|                           | $V_{F3}$   |     |     | 1000 |               | $I_F=50\text{mA}$                                       |
|                           | $V_{F4}$   |     |     | 1250 |               | $I_F=150\text{mA}$                                      |
| Reverse recovery Time     | $t_{rr}$   |     |     | 6.0  | ns            | $I_F=I_R=10\text{mA}$ , $R_L=50\Omega$                  |
| Reverse current           | $I_R$      |     |     | 1.0  | $\mu\text{A}$ | $V_R=75\text{V}$                                        |
| Forward recovery voltage  | $V_{FR}$   |     |     | 1.75 | V             | $I_F=10\text{mA}$ , $t_r=20\text{ns}$                   |
| Diode capacitance         | $C_D$      |     |     | 2.0  | pF            | $V_R=0\text{V}$ , $f=1\text{MHz}$                       |
| Stored charge             | $Q_S$      |     |     | 45   | pC            | $I_F=10\text{mA}$ , $V_R=5.0\text{V}$ , $R_L=500\Omega$ |

## Typical Characteristics

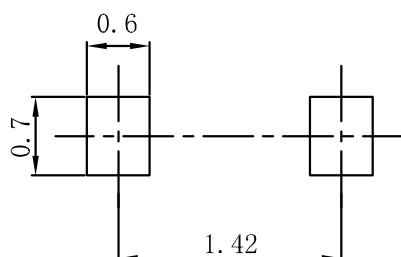


## SOD-523 Package Outline Dimensions



| Sym ol   | imensions In Millimeters |       | imensions In Inches |       |
|----------|--------------------------|-------|---------------------|-------|
|          | Min                      | Max   | Min                 | Max   |
| A        | 0.510                    | 0.770 | 0.020               | 0.031 |
| A1       | 0.500                    | 0.700 | 0.020               | 0.028 |
| b        | 0.250                    | 0.350 | 0.010               | 0.014 |
| c        | 0.080                    | 0.150 | 0.003               | 0.006 |
| D        | 0.750                    | 0.850 | 0.030               | 0.033 |
| E        | 1.100                    | 1.300 | 0.043               | 0.051 |
| E1       | 1.500                    | 1.700 | 0.059               | 0.067 |
| E2       | 0.200 REF                |       | 0.008 REF           |       |
| L        | 0.010                    | 0.070 | 0.001               | 0.003 |
| $\theta$ | 7° REF                   |       | 7° REF              |       |

## SOD-523 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05\text{mm}$ .
3. The pad layout is for reference purposes only.